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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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EXAMINER

SCHECHTER, ANDREW M

ART UNIT

PAPER NUMBER

2871

DATE MAILED: 10/17/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/848,642

Applicant(s)

YAMAZAKI ET AL.

Examiner

Andrew Schechter

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AW

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 July 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,6-16 and 18-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3,6-16 and 18-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 8.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Claim Objections

1. Claims 6 and 11 are objected to because of the following informalities: "the pixel electrode" should be "a pixel electrode" since it does not have an antecedent.

Appropriate correction is required.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 13-16 and 18 are rejected under 35 U.S.C. 102(b) as being anticipated by *Yokomizu*, Japanese Patent Document No. 10-073813. (The examiner has obtained a machine-translation of the reference which was supplied without complete translation by the applicant; the examiner relies upon this machine-translation throughout this office action and encloses a copy for the applicant.)

Yokomizu discloses [see Figs. 1 and 2, and consider the 4th black matrix from either left or right in Fig. 1] an electro-optical device comprising a plurality of pixel electrodes [13] provided over a substrate [10], light shielding portions [21BM] comprising a lamination of a first colored layer [21B] and a second colored layer [21R], wherein the light shielding portions are formed so as to cover regions between each of

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said pixel elements and its adjacent pixel elements [see Fig. 2], wherein the light shielding portions are provided over an opposing substrate [20], and wherein a liquid crystal [30] is between one of said light shielding portions and said regions between each of said pixel electrodes and its adjacent pixel electrodes. Claim 13 is therefore anticipated.

The first colored layer [21B] is blue and the second colored layer [21R] is red, so claims 14 and 15 are also anticipated. Switching elements [12] are connected to the pixel electrodes [see paragraph 0018], so claim 16 is also anticipated. The device is a transmission type liquid crystal display device [paragraph 0017] and the pixel electrode is made of a transparent conductive film [paragraph 0018], so claim 18 is also anticipated.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1-3, 6, and 8-11 rejected under 35 U.S.C. 103(a) as being unpatentable over *Yokomizu*, Japanese Patent Document No. 10-073813 in view of *Nagayama et al.*, U.S. Patent No. 5,680,187.

Yokomizu discloses [see Figs. 1 and 2, and consider the 4th black matrix from either left or right in Fig. 1] an electro-optical device comprising light shielding portions

[21BM] comprising a lamination of a first colored layer [21B] and a second colored layer [21R], wherein the light shielding portions are provided over an opposing substrate [20], and wherein a liquid crystal [30] is between one of said light shielding portions and a channel forming region provided over the other substrate.

Yokomizu also discloses having at least one of the light shielding portions formed overlapping the switching elements [12] provided over the other substrate [see Fig. 1]. It does not explicitly disclose forming them overlapping a channel forming region of switching elements. (Though it does mention using TFTs as the switching elements, which inherently have channel regions, so it comes very close to anticipating this limitation as well.)

Nagayama discloses using TFTs with channel regions as the switching elements and having the light shielding portions overlap them [see Fig. 1]. It would have been obvious to one of ordinary skill in the art to do so, motivated by *Nagayama*'s teachings that "using TFTs as switching elements has recently become widely used" [col. 1, lines 28-29], that "the TFT ... comprises a semiconductor layer (a layer in which a channel is formed)" [col. 7, lines 64-65], and that by using a light shield overlapping the active elements "the malfunction of the active elements due to external light can be prevented" [col. 6, lines 1-3]. Claim 1 is therefore unpatentable.

Since the switching element is a TFT (thin film transistor) (both disclosed in *Yokomizu* and taught in *Nagayama*), claim 8 is also unpatentable.

In *Yokomizu*, the first colored layer [21B] is blue and the second colored layer [21R] is red, so claims 2, 3, 9, and 10 are also anticipated. The device is a transmission

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type liquid crystal display device [paragraph 0017] and the pixel electrode is made of a transparent conductive film [paragraph 0018], so claims 6 and 11 are also anticipated.

6. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over *Yokomizu*, Japanese Patent Document No. 10-073813 as applied to claim 13 above, in view of *Nagayama et al.*, U.S. Patent No. 5,680,187.

Yokomizu also discloses having at least one of the light shielding portions formed overlapping the switching elements [12] provided over the other substrate [see Fig. 1]. It does not explicitly disclose forming them overlapping a channel forming region of switching elements. (Though it does mention using TFTs as the switching elements, which inherently have channel regions, so it comes very close to anticipating this limitation as well.)

Nagayama discloses using TFTs (connected to the pixel electrodes) with channel regions as the switching elements and having the light shielding portions overlap them [see Fig. 1]. It would have been obvious to one of ordinary skill in the art to do so, motivated by *Nagayama's* teachings that "using TFTs as switching elements has recently become widely used" [col. 1, lines 28-29], that "the TFT ... comprises a semiconductor layer (a layer in which a channel is formed)" [col. 7, lines 64-65], and that by using a light shield overlapping the active elements "the malfunction of the active elements due to external light can be prevented" [col. 6, lines 1-3]. Claim 20 is therefore unpatentable.

7. Claims 7, 12, and 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Yokomizu* as applied to claim 13 above, or *Yokomizu* in view of *Nagayama* as applied to claims 1 and 8 above.

These two references do not explicitly disclose the recited use of their LCD panels, but it would have been obvious to one of ordinary skill in the art to use them in any of the well-known and conventional devices recited, for instance as the screen in a personal computer, motivated by the usefulness of these devices with such LCD panels. Claims 7, 12, and 19 are therefore unpatentable.

Conclusion

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Andrew Schechter whose telephone number is (703) 306-5801. The examiner can normally be reached on Monday - Friday, 9:00 - 5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert H. Kim can be reached on (703) 305-3492. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0956.

AS

Andrew Schechter
1 October 2003

TOANTON
PRIMARY EXAMINER